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**TRANSMITTAL  
FORM**

(to be used for all correspondence after initial filing)

Application Number	10/707,744
Filing Date	January 8, 2004
First Named Inventor	Sugar et al.
Art Unit	2685
Examiner Name	Edward F. Urban
Attorney Docket Number	COG-2-0977.02.US

Total Number of Pages in This Submission

**ENCLOSURES (Check all that apply)**

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Fee Transmittal Form                                     | <input type="checkbox"/> Drawing(s)                                       | <input type="checkbox"/> After Allowance communication to Technology Center (TC)        |
| <input type="checkbox"/> Fee Attached   | <input type="checkbox"/> Licensing-related Papers                         | <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences     |
| <input type="checkbox"/> Amendment/Reply  | <input type="checkbox"/> Petition   | <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) |
| <input type="checkbox"/> After Final  | <input type="checkbox"/> Petition to Convert to a Provisional Application | <input type="checkbox"/> Proprietary Information  |
| <input type="checkbox"/> Affidavits/declaration(s)                                | <input type="checkbox"/> Power of Attorney, Revocation                    | <input type="checkbox"/> Status Letter  |
| <input type="checkbox"/> Extension of Time Request                                | <input type="checkbox"/> Change of Correspondence Address                 | <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):         |
| <input type="checkbox"/> Express Abandonment Request                              | <input type="checkbox"/> Terminal Disclaimer                              | Form PTO-1449 w/ copies of eight (8) references   |
| <input checked="" type="checkbox"/> Supplemental Information Disclosure Statement | <input type="checkbox"/> Request for Refund                               |   |
| <input type="checkbox"/> Certified Copy of Priority Document(s)                   | <input type="checkbox"/> CD, Number of CD(s) _____                        |   |
| <input type="checkbox"/> Response to Missing Parts/Incomplete Application         | Remarks   |   |
| <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53      |   |   |

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm or Individual name	Jeffrey M. Glabicki	Reg. No. 42,584
Signature		
Date	February 2, 2006	

**CERTIFICATE OF TRANSMISSION/MAILING**

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Typed or printed name	Jeffrey M. Glabicki		
Signature		Date	February 2, 2006

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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**PATENT**

**THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In the **PATENT APPLICATION** of:

Sugar et al.

**Application No.:** 10/707,744

**Confirmation No.:** 1743

**Filed:** January 8, 2004

**For:** MULTIPLE-INPUT MULTIPLE-  
OUTPUT RADIO TRANSCEIVER

**Group:** 2685

**Examiner:** Edward F. Urban

**Our File:** COG-2-0977.02.US

**Date:** February 2, 2006

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Further to Applicants' Duty of Disclosure pursuant to 37 C.F.R. §1.56, Applicants wish to bring to the Examiner's attention the material cited on the enclosed PTO-1449 form. Newly cited documents are indicated by an asterisk (\*). Copies of the cited documents are enclosed.

Pursuant to 37 C.F.R. §1.98(a)(2)(ii), copies of the cited U.S. publications and/or patent documents have not been included.

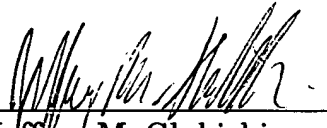
**Applicant:** Sugar et al.  
**Application No.:** 10/707,744

It is respectfully requested that the Examiner consider these documents and return an initialed copy of the PTO-1449 form indicating his consideration of the cited materials.

Respectfully submitted,

Sugar et al.

By

  
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(215) 568-6400

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Philadelphia, PA 19103

JMG/ks  
Enclosures (9)



FORM PTO-1449

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEINFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

(Use several sheets if necessary)

ATTY. DOCKET NO.  
COG-2-0977.02.USSERIAL NO.  
10/707,744APPLICANT  
Sugar et al.FILING DATE  
January 8, 2004GROUP  
2685

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		4,150,344	04/1979	Fenk			
		4,263,676	04/1981	Liebel			
		4,310,809	01/1982	Buck et al.			
		4,580,289	04/1986	Enderby			
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		6,239,645	05/2001	Tsukahara et al.			

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<b>FORM PTO-1449</b>  <b>U.S. DEPARTMENT OF COMMERCE</b> <b>PATENT AND TRADEMARK OFFICE</b>  <b>INFORMATION DISCLOSURE</b> <b>STATEMENT BY APPLICANT</b>  (Use several sheets if necessary)				<b>ATTY. DOCKET NO.</b> COG-2-0977.02.US		<b>SERIAL NO.</b> 10/707,744	
				<b>APPLICANT</b> Sugar et al.			
				<b>FILING DATE</b> January 8, 2004		<b>GROUP</b> 2685	
<b>U.S. PATENT DOCUMENTS</b>							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		6,252,548	06/2001	Jeon			
		6,259,895	07/2001	Yoshikawa et al.			
		6,282,413	08/2001	Baltus			
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		2002/0164963	11/2002	Tehrani et al.			

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U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		2002/0165626	11/2002	Hammons, Jr. et al.			
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		2005/0047384	03/2005	Wax et al.			
		2005/0123025	06/2005	Sorrells et al.			

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				APPLICANT Sugar et al.				
				FILING DATE January 8, 2004		GROUP 2685		
FOREIGN PATENT DOCUMENTS								
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
		03/092997	11/2003	WO				
		0 823 790	02/1998	EP				
	*	1 207 645	05/2002	EP				
	*	1 387 501	02/2004	EP				
	*	1 569 362	08/2005	EP				
		H11-46113	02/1999	JP			X**	
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		2002-26462	01/2002	JP			X**	
		2003-244045	08/2003	JP			X**	
		2003-283359	10/2003	JP			X**	
	*	2003-060604	02/2003	JP			X**	
	*	2004-179822	06/2004	JP			X**	
	*	2004-336561	11/2004	JP				
	*	2003-0058265	07/2003	KR				X
	*	2005-0013011	02/2005	KR				X

\*\* Abstract Only

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	<p align="center">APPLICANT Sugar et al.</p>	
	<p align="center">FILING DATE January 8, 2004</p>	<p align="center">GROUP 2685</p>
<p align="center">OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</p>		
		<p>"Fodus Delivers 802.11B/G and 802.11B/A/G WLAN Total Solutions", <a href="http://www.fodus.com/DOCS/2003-09-15%20Fodus%20Press%20Release.htm">http://www.fodus.com/DOCS/2003-09-15%20Fodus%20Press%20Release.htm</a>, September 15, 2003.</p>
		<p>"Parkervision Announces Successful Development of Most Integrated High Performance Wireless LAN Transceiver Chips Current Available", July 30, 2002.</p>
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		<p>Behbahani et al., "An All CMOS, 2.4 GHz, Full Adaptive, Scalable, Frequency Hopped Tranceiver", University of California, Los Angeles, Integrated Circuits &amp; Systems Laboratory, date unknown.</p>
		<p>Brodersen, "BWRC Status", Summer 2002 Retreat Presentations, Berkeley Wireless Research Center, June 3, 2002.</p>
		<p>Cabric et al., "RF Front-End for MCMA Systems", Summer 2002 Retreat Presentations, Berkeley Wireless Research Center, June 3, 2002.</p>
		<p>Cho et al., "Multi-Standard Monolithic CMOS RF Transceiver", University of California, Berkeley, January 8, 1996, (1-26).</p>
		<p>Clarke, "Chip Set Bridges 802.11a and .11b Wireless LANs", EETimes.com, <a href="http://www.eetimes.com/showArticle.jhtml?articleID=10809297">http://www.eetimes.com/showArticle.jhtml?articleID=10809297</a>, September 24, 2001.</p>
		<p>Copeland et al., "5GHz SiGe HBT Monolithic Radio Transceiver with Tunable Filtering", IEEE Trans. On Microwave Theory and Techniques, February 2000, Vol. 48, No. 2.</p>
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		<p>Gozali et al., "Virginia Tech Space-Time Advanced Radio (VT-STAR)", Proceedings, Radio and Wirless Conference (RAWCON), 2001.</p>
		<p>Lantz, "A 5GHz, SiGe, Monolithic WLAN Transceiver", PCC Workshop, 1999.</p>
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		APPLICANT Sugar et al.	
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
		Long, "A Low Voltage 5.1-5.8 GHz Image-Reject Downconverter RF IC", IEEE Journal of Solid State Circuits, Vol. 35, No. 9, September 2000, pp. 1320-1328.	
		Macedo et al., "A 1.9-GHz Silicon Receiver with Monolithic Image Filtering", IEEE Journal of Solid-State Circuits, Vol. 33, No. 3, March 1998, pp., 378-386.	
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		PV-1000Hb 802.11b RF Transceiver Product Specification, 2002, pp. 1-11.	
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		Rudell et al., "Second Generation Multi-Standard Monolithic CMOS RF Transceiver", University of California, Berkeley, June 16, 1996.	

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